ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	ELECTROACTIVE POLYMER ACTUATED SHEATH FOR IMPLANTABLE OR INSERTABLE MEDICAL DEVICE

Application Number : 10/702314

Confirmation Number: 7968

First Named Applicant: Richard Mattison

Attorney Docket Number: 03-099

Art Unit: ~~3731~~ 3734

Examiner:

Search string: (6447540 or 6264671 or 20030069474 or 20010001833).pn

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
W	1	6447540	2002-09-10	Fontaine et al.	B1	623	1.12
W	2	6264671	2001-07-24	Stack et al.	B1	606	198

US Published Applications

Note: Applicant is not required to submit a paper copy of cited US Published Applications

init	Cite.No.	Pub. No.	Date	Applicant	Kind	Class	Subclass
W	1	20030069474	2003-04-10	Couvillon, Jr.	A1	600	152
W	2	20010001833	2001-05-24	Ravenscroft et al.	A1	623	1.12

Signature

Examiner Name	Date
	3/24/07

Docket No.: 03-099

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 5

Complete if Known	
Application Number	10/702,314
Filing Date	11/06/2003
First Named Inventor	Richard Carlton Mattison
Group Art Unit	3734
Examiner Name	Unassigned
Attorney Docket Number	03-099

Examiner Initials*	Cite No. [1]	U.S. Patent Document Number	Class/Subclass	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
M	1.	US2002/0039620A1	427/2.12	Shahinpoor et al.	04/04/2002
	2.	6,514,237 B1	604/533	Maseda	02/04/2003
	3.	6,475,639 B2	428/614	Shahinpoor et al.	11/05/2002
	4.	6,391,051 B2	623/1.12	Sullivan III et al.	05/21/2002
	5.	6,109,852	414/1	Shahinpoor et al.	08/29/2000
	6.	5,855,565	604/104	Bar-Cohen et al.	01/05/1999
	7.	5,631,040	427/100	Takuchi et al.	05/20/1997
	8.	5,268,082	204/282	Oguro et al.	12/07/1993
	9.	US2001/0026165A1	324/750	Pelrine et al.	10/04/2001
	10.	6,520,983 B1	623/1.11	Colgan et al.	02/18/2003
	11.	6,249,076 B1	310/363	Madden et al.	06/19/2001
	12.	6,117,296	204/607	Thomson	09/12/2000
	13.	5,766,013	434/114	Vuyk	06/16/1998
	14.	5,556,700	428/332	Kaneto et al.	09/17/1996
	15.	5,389,222	204/299.2	Shahinpoor	02/14/1995
	16.	5,100,933	523/300	Tanaka et al.	03/31/1992
M	17.	5,250,167	204/299 R	Adolf et al.	10/05/1993

Examiner Initials*	Cite No. [1]	Foreign Patent Document Office [3]	Number [4]	Class/Subclass	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T
M	1.	WO	01/58973A2	C08G	SRI International	08/16/2001	

Examiner Signature		Date Considered	3/24/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English Language Translation is attached.

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(use as many sheets as necessary)* Sheet 2 of 5	*Complete if Known*	
	Application Number	10/702,314
	Filing Date	11/06/2003
	First Named Inventor	Richard Carlton Mattison
	Group Art Unit	3731
	Examiner Name	Unassigned
	Attorney Docket Number	03-099

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. [1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	1	JAGER, EDWIN W.H., et al., "Applications of Polypyrrole Microactuators," SPIE Proceedings, Conference on Electroactive Polymer Actuators and Devices, March 1999, Vol. 3669, pp. 377-384.	
	2.	OTERO, TORIBIO et al., "EAP as Multifunctional and Biomimetic Materials," SPIE Proceedings, Conference on Electroactive Polymer Actuators and Devices, March 1999, Vol. 3669, pp. 26-34.	
	3.	SMELA, ELISABETH, "Conjugated Polymer Actuators for Biomedical Applications," *Advanced Materials*, Vol. 15, no. 6, March 17, 2003, pp. 481-494	
	4.	GÜLCH, RANIER W., et al., "Characterization of Electroactive Behavior and of Progress in Developments and Applications of Ionic Polymer Gels," *Smart Structures and Materials 2002*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 4695, 2002, pp. 367-377.	
	5.	BAR-COHEN, YOSEPH, "Electroactive Polymers as Artificial Muscles – Capabilities, Potentials and Challenges," Sec. 11 in chap. 8 of *Handbook on Biomimetics*, ed. Yoshihito Osada (NTS, Inc., 2000), pp. 1-13.	
	6.	WAX, S.G., et al., "Compliant Actuators Based on Electroactive Polymers," Materials Research Society Symposium Proceedings, Vol. 600, 2000, pp. 3-11.	
	7.	ROCCHIA, W., et al., "Exploiting Conducting Polymer Radial Expansion for Bioinspired Actuation," *Smart Structures and Materials 2003*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 5051, 2003, pp. 453-457.	
	8.	SAHOO, HEMANTKUMAR, et al., " Actuators Based on Electroactive Polymers," *Current Science*, Vol. 81, no. 7, Oct. 2001, pp. 743-746.	
	9.	SANSIÑENA, JOSÉ-MARIA, et al., "Conductive Polymers," Chap. 7 in *Electroactive Polymer Actuators (EAP) as Artificial Muscles*, ed. Y. Bar-Cohen (SPIE Press, 2001), pp. 193-221.	

Examiner Signature		Date Considered	3/24/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English Language Translation is attached.

Docket No.: 03-099

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(use as many sheets as necessary)*				*Complete if Known*	
				Application Number	10/702,314
				Filing Date	11/06/2003
				First Named Inventor	Richard Carlton Mattison
				Group Art Unit	3731
				Examiner Name	Unassigned
Sheet	3	of	5	Attorney Docket Number	03-099

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. [1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	10.	BAR-COHEN, YOSEPH, ed., *WorldWide ElectroActive Polymers EAP (Artificial Muscles) Newsletter*, Vol. 3, no. 1, June 2001.	
	11.	BAR-COHEN, YOSEPH, "EAP History, Current Status, and Infrastructure," Chap. 1 in *Electroactive Polymer Actuators (EAP) as Artificial Muscles*, ed. Y. Bar-Cohen (SPIE Press, 2001), pp. 3-43.	
	12.	KORNBLUH, ROY, et al., "Application of Dieelectric Elastomer EAP Actuators," Chap. 16 in *Electroactive Polymer Actuators (EAP) as Artificial Muscles*, ed. Y. Bar-Cohen (SPIE Press, 2001), pp. 457-495.	
	13.	BAR-COHEN, YOSEPH, "Transition of EAP Material from Novelty to Practical Applications – Are We There Yet?" *Smart Structures and Materials 2001*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 4329, 2001, pp. 1-6.	
	14.	PELRINE, RON, et al., "Applications of Dielectric Elastomer Actuators," *Smart Structures and Materials 2001*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 4329, 2001, pp. 335-349.	
	15.	MADDEN, JOHN D.W., et al., "Polyprrole Actuators: Modeling and Performance," *Smart Structures and Materials 2001*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 4329, 2001, pp. 72-83.	
	16.	BAR-COHEN, YOSEPH, "EAP Applications, Potential, and Challenges," Chap. 21 in *Electroactive Polymer Actuators (EAP) as Artificial Muscles*, ed. Y. Bar-Cohen (SPIE Press, 2001), pp. 615-659.	
	17.	JAGER, EDWIN W.H., et al., "Microfabricating Conjugated Polymer Actuators," *Science*, Vol. 290, Nov. 2000, pp. 1540-1545.	
	18.	SMELA, ELISABETH, et al., "Electrochemically Driven Polypyrrole Bilayers for Moving and Positioning Bulk Micromachined Silicon Plates," *Journal of Microelectromechanical Systems*, Vol. 8, no. 4, Dec. 1999, pp. 373-383.	

Examiner Signature		Date Considered	3/24/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English Language Translation is attached.

Please type a plus sign (+) inside this box. FORM PTO/SB/08

Docket No.: 03-099

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(use as many sheets as necessary)*				*Complete if Known*	
				Application Number	10/702,314
				Filing Date	11/06/2003
				First Named Inventor	Richard Carlton Mattison
				Group Art Unit	3731
				Examiner Name	Unassigned
Sheet	4	of	5	Attorney Docket Number	03-099

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. [1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
	19.	SMELA, ELISABETH, et al., "Thiol-Modified Pyrrole Monomers: 1. Synthesis, Characterization, and Polymerization of 1-(2-Thioethyl)pyrrole and 3-(2-Thioethyl)pyrrole," *Langmuir*, Vol. 14, 1998, pp. 2970-2975.	
	20.	SMELA, ELISABETH, "Microfabrication of Ppy Microactuators and Other Conjugated Polymer Polymer Devices," *Journal of Micromechanics and Microengineering*, Vol. 9, 1999, pp. 1-18.	
	21.	IMMERSTRAND, C., et al., "Conjugated-Polymer Micro- and Milliactuators for Biological Applications," *Materials research Society Bulletin*, June 2002, pp. 1-4.	
	22.	MADDEN, JOHN D.W., et al., "Conducting Polymer Actuators as Engineering Materials," *Smart Structures and Materials 2002*, ed. Y. Bar-Cohen, SPIE Proceedings, Vol. 4695, 2002, pp. 176-190.	
	23.	ZHOU, D., et al., "Actuators for the Cochlear Implant," *Synthetic Materials*, Vol. 135-136, 2003, pp. 39-40.	
	24.	http://www.micromuscle.com	
	25.	BROCK, DAVID L., Review of Artificial Muscle Based on Contractile Polymers. Massachusetts Institute of Technology Artificial Intelligence Laboratories. http://www.a1.mit.edu/projects/muscle/papers/memo1330/memo1330.html	
	26.	Material: Conducting polymers, Dielectric elastomers, Piezoelectric materials. http://www.designinsite.dk/htmsider	
	27.	Artificial Muscle Transducers. http://www.erg.sri.com/automation/actuators.html	

Examiner Signature		Date Considered	3/24/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] Applicant is to place a check mark here if English Language Translation is attached.

Docket No.: 03-099

Substitute for form 1449A/PTO **INFORMATION DISCLOSURE STATEMENT BY APPLICANT** *(use as many sheets as necessary)*				*Complete if Known*	
				Application Number	10/702,314
				Filing Date	11/06/2003
				First Named Inventor	Richard Carlton Mattison
				Group Art Unit	3731
				Examiner Name	Unassigned
Sheet	5	of	5	Attorney Docket Number	03-099

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. [1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
W	28.	Miniature Electroactive-Polymer Rakes. http://www.nasatech.com/Briefs/Oct01/NPO20613.html	
	29.	Electroactive polymer. Nano Bioelectronics & Systems Research Center. http://nanobio.snu.ac.kr/eng/research_5.html	
	30.	Polymers and Separations Research Lab (PolySep). Electroactive Polymers as Artificial Muscles – A Primer. http://polysep.ucla.edu/Research%20Advances/EAP/electroactive_polymers-asartifi.htm	
	31.	Aviation Research. You Decide. Electroactive Polymers 2: Ionic and Conductive Polymers. http://virtualskies.arc.nasa.gov/research/youDecide/ionicNConducPolym.html	
	32.	ElectroActive Polymers – EAPs. http://www.azom.com/details.asp?ArticleID=885	
W	33.	http://www.darpa.mil/dso/trans/electropolymers/projects/EAP_Jan02_LJB.pdf	

Examiner Signature		Date Considered	3/24/07

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.
[1] Unique citation designation number. [2] Applicant is to place a check mark here if English Language Translation is attached.